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ABSTRACT

Although humor and laughter are most often based in fundamental social interactions, this element of communication has received little attention. To examine the socially facilitating effects of communication and social acceptance by analyzing children's intrapersonal perceptions of communication apprehension, or shyness, 169 children, aged 8 to 13 years, completed the Shyness/Humor Inventory. In addition, subjects completed the Classroom Social Distance Scale, interpersonal humor ratings, sociometric nominations, and locus of control and self-esteem measures. The results of a factor analysis of the Shyness/Humor Inventory found five distinct factors (Ebullience, Communication Apprehension, Stranger Anxiety, Humorousness, Classroom Communication) to be significant predictors of classroom social distance and humor ratings, positive sociometric nomination scores, and two related intrapersonal perceptions of self-esteem and locus of control. Classroom social distance ratings were most strongly predicted by children's interpersonal perceptions of humorousness, as well as their positive sociometric nominations, ages, and intrapersonal perceptions of locus of control and shyness. The findings suggest the necessity of interpersonal communication with regard to the socially facilitating effects of humor. (BL)

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# INTRAPERSONAL PERCEPTIONS OF SHYNESS AND HUMOR AS RELATED TO INTERPERSONAL PERCEPTIONS OF SOCIAL DISTANCE AND HUMOROUSNESS.

BY

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A PAPER PRESENTATION TO THE FOURTH INTERNATIONAL CONGRESS ON HUMOR, TEL AVIV, ISRAEL, JUNE 10-15, 1984.

RUNNING HEAD: SHY HUMOR

ABSTRACT

Factor analysis of a 25-item intrapersonal Shyness/Humor Inventory was carried out on the responses of 169 elementary children between the ages of 8 and 13. Five distinct factors (Ebullience, Communication Apprehension, Stranger Anxiety, Humorousness, Classroom Communication) were found to be significant predictors of classroom social distance and humor ratings, positive sociometric nomination scores, as well as two related intrapersonal perceptions of self-esteem and locus of control. Classroom social distance ratings were most strongly predicted by children's interpersonal perceptions of humorousness, as well as their positive sociometric nominations, ages, and intrapersonal perceptions of locus of control and shyness. The data confirm a hypothesis suggesting the necessity of interpersonal communication with regard to the socially facilitating effects of humor. Tajfel's (1982) theories concerning inter-group behavior are drawn upon for theoretical explanation. The development of childen's humor production as well as appreciation are suggested as a viable theraputic intervention approach for children experiencing communication apprehension difficulties as well as social rejection. This study attempts to link together three areas of research: (1) the socially facilitating functions of humor in small groups, (2) children's friendships, social attraction and rejection, and (3) shyness and communication apprehension.

INTRAPERSONAL PERCEPTIONS OF SHYNESS AND HUMOR AS RELATED TO INTERPERSONAL PERCEPTIONS OF SOCIAL DISTANCE AND HUMOROUSNESS[1]

This researcher's previous studies of pre-schoolers' "gleeful" behaviors (Sherman, 1975; 1977) indicated strong prosocial social psychological as well as ecological factors being associated with children's laughter. Other humor researchers primarily in the areas of social psychology and sociology strongly believe that most humor is associated with interpersonal relationships. Humor and laughter are most often based in fundamental social interactions (Martineau, 1972; McGhee, 1979; and especially Chapman, Smith & Foot, 1980). As Gary Fine (1983) has concluded "Humor involves communication among at least two people - either directly or indirectly" (p. 176). Chapman (1983) has pointed out that humor and "...laughter can reveal group allegiances, communicate attitudes, and help in establishing and reaffirming dominance in status hierarchies" (p. 135). Chapman et al (1980) has further stated that "...it cannot be over-emphasized that laughter rarely occures except in the company of others. Facilitative effects appear to be much more closely associated with the sharing of a social situation" (p. 157). The element of communication would have to be strongly associated with this "sharing." Nevertheless, this element of communication has received little attention in the social psychological and sociological literature, with the notable exception of an earlier symposium on "Humour and Communication" held during the First International Conference on Humour and Laughter (Zillmann, 1977).

The present study attempts to examine the socially facilitating effects of communication and social acceptance through the analysis of children's intrapersonal perceptions of what McCroskey (1970) has

termed "communication apprehension": in other words, "shyness." Many researchers have had an interest in shyness (e.g., Zimbardo, 1977). Shyness is a general term referring to discomfort about communication (Page, 1980) or a relative absence of expected social behaviors (Buss, 1980). A related term, "reticence," has been viewed as a behavioral problem of inadequate communication skills (Kelly, 1982). McCroskey (1970) has defined "communication apprehension" as a type of shyness stemming from anxiety about oral communication. Several means of assessing shyness have been suggested including behavioral observations, teacher ratings, and self ratings. It has been suggested that because an individual considered shy is often very aware of their difficulties in oral communication situations, self perceptions may be the most important factor, and self ratings are thus considered to be one reliable approach to measuring this behavior (McCroskey, 1970). One viable Likert-type scale developed by McCroskey (1970; 1978) is the Personal Report of Communication Apprehension.

Among the various social functions which humor might facilitate, Chapman et al (1980) has suggested "...that humor may sometimes be used and seen to vary as a function of the "pecking order" in the classroom (Coser, 1960); class "clowns," though scoring higher on popularity are rarely seen as classroom leaders (Goodchilds, 1959; Goodchilds & Smith, 1964). An additional observation by Chapman et al (1980) suggests that "...Children use humour to assess their status within the group as the group itself develops" (p. 171). If communication is a necessary element in facilitating humor in small groups, then children experiencing "communication apprehension," or shyness, would not be expected to be perceived as being very humorous.

Neither would they be expected to intrapersonally perceive themselves as humorous. Confirmation of either one or both of these hypothesis would provide further validation of the "communication apprehension" construct, as well as the socially facilitating effects of humor. Children's interpersonal perceptions of each other's humorousness might likewise validate the reality of their intrapersonal perceptions. Children's interpersonal perceptions of each other's humorousness might also be expected to be highly associated with their interpersonal perceptions of social acceptability as well as general popularity among their classroom peers. Confirmation of this hypothesis would further substantiate the socially facilitating effects of humor among children's peer groups. One additional importance to this study is its attempt to draw together three specific areas of research: (1) the social aspects of children's humor, (2) the development of children's friendships, popularity, and social rejection, and (3) communication apprehension.

In order to examine these and other related questions a mid-western, university laboratory school sample was studied during the fourth and last year of an ongoing longitudinal study of childrens' developing social relationships. Three previous studies have been reported on this population (Sherman, 1981; 1984; in press). Data reflecting both interpersonal and intrapersonal perceptions of 8- through 13-yr-old children were collected annually each November. During the last year of the study children were asked to rate themselves on a 25-item Shyness/Humor Inventory. They were also asked to rate each other's humorousness on a 1 to 5 Likert-type scale, as well as to intrapersonally rate their own humorousness. Nearly five months preceeding the collection of this data the children responded

to both positive and negative sociometric nomination questions as well as were asked to rate each other on a 1 to 5 Likert-type social distance scale. At the same time as they responded to the various psychometric and sociometric measures, they also responded to two additional intrapersonal measures of (1) self-esteem and (2) locus of control. With the exception of the humor and shyness data collected only during the last year, the same data were also collected each of the three preceeding years. By applying various correlational techniques, a factor analytic as well as multiple-regression approach was arrived at which examined the various relationships between children's intrapersonal and interpersonal perceptions of both shyness and humorousness as well as the two additional intrapersonal perceptions of self-esteem and locus of control.

## METHOD

### SCHOOL SETTING AND SAMPLE.

SETTING. The laboratory school from which the data were collected was administered by a midwestern university school of education. The school was used as a research facility as well as a field site for both undergraduate pre-service and graduate student training. Many experimental programs were actively being pursued in this facility.2 The school annually included approximately 243 children ranging in age from 5 through 13. Approximately 70 to 80 percent of the children's parents were affiliated with the university. Structurally there were three levels: the Primary Unit, including 5-, 6- and 7-yr-olds; Intermediate Unit, including 8-, 9-, and 10-yr-olds. The Advanced Unit was organized into three traditionally age-homogeneous sixth, seventh and eighth grade classrooms consisting of 11-, 12-, and 13-yr-olds respectively. Six separate classrooms

each containing approximately 27 children of mixed ages were utilized in the Primary and intermediate Units. An equal number of both sexes as well as the three age groups were placed in each of the three Primary and three Intermediate classrooms (e.g., in the three Intermediate classrooms there would be approximately nine 8-yr-olds, nine 9-yr-olds, and nine 10-yr-olds equally distributed between both sexes). Further descriptions of this population are contained in Sherman (1981; 1984; in press).

SAMPLE. The present study examined, both longitudinally as well as cross-sectionally, children between the ages of 8 and 13 in six classroom each of four years. There were varying numbers of children measured in each of the four years of the study: the 1979 sample had 167 students, the 1980 and 1982 samples each included 169 children and the 1981 sample included 164 children. Many of the first year subjects were present during the second, third and fourth years of the study, either one, two or three years older respectively. Attrition of the 13-yr-olds after the first year, the 12-yr-olds after the second year, and the 11-yr-olds after the third year left three stable cohorts of 8-, 9- and 10-yr-olds throughout the four year study. New groups of 8-yr-olds entered the cross-sectional samples during the second, third and fourth years. The ages of the children were determined as of October 1 of each year, the official State of Ohio demarcation point for determining normal grade level placement in public schools.

INSTRUMENTS.

COMMUNICATION APPREHENSION. The 25-item Shyness/Humor Inventory was developed as an adaptation of McCroskey's (1970) Personal Perceptions of Communication Apprehension Scale. Seventeen

Likert-type items were responded to on a 1 to 5 scale. The items were phrased such that a strongly affirmative answer to a statement declaring lack of communication apprehension was scored a 5 and conversely a strongly negative response to a declarative statement expressing the presence of communication apprehension was also scored a 5. Thus a perfect lack of shyness response pattern would achieve a theoretically high score of 105 and the lowest scores, indicating shyness, could theoretically reach 17. Eight additional Likert-type items were also included. Three items dealt with the children's intrapersonal perceptions of humor, two dealt with quite direct questions regarding their perceptions of shyness, and three were simply added to examine the children's feelings about either themselves or the school setting in general.

SOCIAL DISTANCE. Annually, during the first two weeks of November, sociometric measures in the form of ratings as well as both positive and negative nominations were obtained in the children's homerooms (age-heterogeneous settings for the Intermediate children and age-homogeneous settings for the Advanced Unit (See Asher & Hymel, 1981, Kane & Lawler, 1978, as well as Miller & Gentry, 1980 for further discussions of these techniques). An adaptation of a sociometric rating scale developed by the Horace Mann-Lincoln Institute of School Experimentation (Bureau of Publications, 1947) entitled the Classroom Social Distance Scale, was utilized. The scale is modeled after Bogardus (1928) sociologically oriented strategy and allows each child within any particular classroom to both give and receive from every child a rating on a 1 to 5 continuum. The rating continuum was as follows: "(1) Would like to have her/him as one of my best friends; (2) would like to have her/him in my group but not as

a close friend; (3) would like to be with her/him once in awhile but not often or for long at a time; (4) don't mind her/him being in our room but I don't want to have anything to do with her/him; (5) wish she/ne weren't in our room." Students were given a survey-matrix in which the columns consisted of an alpha/vertical list of the children in their room, and the rows were labeled in the left margin with the 5-point rating continuum. Children were asked to indicate the statement which most nearly defined their feelings about each person. Each child's mean social distance score was then computed. Theoretically, the mean social distance scores, a continuous measure, could range from 1 to 5 and relatively low scores (1) would indicate less social distance while relatively high scores (5) would indicate greater social distance. This social distance measure could then be analyzed contingent upon various attributes of both the raters and the ratees, such as their gender as well as their age.

INTERPERSONAL HUMOR RATINGS. In a fashion quite similar to the social distance rating described above, the children were asked to rate each other with regard to how humorous they perceived one another. They were instructed as follows: "I want to find out how funny people are. By funny I don't mean funny-looking or dumb or just plain silly, I mean a person has a good sense of humor, tells good jokes, makes people laugh, and laughs at other's jokes. First find your name and make an 'x' in the column that best describes what most of your classmates might think of you. Next put a check mark (✓) in the column that best describes each one of your classmates on this list." The list, once again, consisted of an alpha/vertical list of children in a classroom, and the horizontal rows consisted of the five point continuum of humorous categories: "(1) Not funny at all, (2)

Not too funny, (3) Sometimes funny, (4) Pretty funny and (5) Very funny!." The children's mean classroom ratings were then computed from this form.

POSITIVE AND NEGATIVE NOMINATIONS. Fixed-rank, positive nomination data were also obtained utilizing three contextually different questions: "(1) Which three children in this classroom would you most like to eat lunch with?; (2) Which three children in this classroom would you most like to go up town to a movie with?; (3) Which three children in this classroom would you most like to work with on a small group project in language arts?" The children were instructed to rank their choices so that their first choice should be the child they would "most want," and their second choice the "next most" and their third choice the "next most" wanted child. One fixed-rank negative nomination question was also used during the last three years of the study: "Which three children in this classroom do you like the least?" Here again they were instructed that their first choice should be the child they "most like the least," etc. These fixed-ranked nominations were then weighted in the following manner: First choices = 3; second choices = 2; third choices = 1; and no nominations = 0. The frequencies in each rank were then multiplied by the appropriate weights and summed across ranks to yield a separate weighted total score for each of the three positive questions and the one negative nomination question. These weighted scores were then transformed into continuous standardized IQ-like scores (the mean was fixed at 100, with a standard deviation of 15) within each separate classroom. This was done to control for the influence of classroom size. Acknowledging Coie & Dodge's (1983) speculation that this procedure might distort the "real picture" (p. 264), it is neverthess

believed that by restricting the children's choices as well as standardizing their positive and negative nomination scores within the context of their own classroom behavior settings, the data would more accurately reflect the children's daily life spaces or cognitive networks. In addition all three positive nomination scores were summed and standardized to yield an overall general popularity quotient.

LOCUS OF CONTROL. Locus of control was measured by the Children's Nowicki-Strickland Internal-External Control Scale (Nowicki & Strickland, 1973; Nowicki & Duke, 1974). The scale has 40 declarative statements which require a "yes" or "no" response. Brim (1974) would describe this as an "agree-disagree scale." Theoretically scores could range from 0 to 40, with highest scores reflecting an external and lowest scores reflecting an internal orientation. Children were read the questions aloud in a standardized fashion while they read from their own copies upon which they recorded their answers.

SELF-ESTEEM. The children were annually administered an abbreviated form of the Coopersmith Self-Esteem Inventory (Robinson & Shaver, 1973). This instrument consists of 25 binary (yes/no responses) declarative items. The items were phrased in both negative and positive forms and were scored one point each for responses which reflect "positive" self-esteem. High scores (25) would reflect strong positive self-esteems whereas low scores (0) would reflect weak or negative self-esteems.

DESIGN AND ANALYSES. In as much as the present study's design is descriptive, the primary statistical tools which were applied to the data were multivariate analyses of Pearson product-moment

correlations. A principal components factor analysis with both a varimax rotation and an oblique promax solution were applied to the 25-item Shyness/Humor Inventory. Using Stepwise multiple-regression procedures, derived factor scores from the factor analysis were used along with several additional variables (sex, age, intrapersonal perceptions of self-esteem and locus of control) as predictors of children's interpersonal ratings of social distance and humorousness.

## RESULTS

The results of this study are reported in three parts: (1) the intrapersonal measures of shyness, humorousness, locus of control and self-esteem are discussed first; (2)the interpersonal perceptions of social distance and humor ratings as well as the sociometric positive and negative nomination peer popularity data are presented next; (3) an attempt at constructing a model that integrates both the intrapersonal and interpersonal perceptions is made.

INTRAPERSONAL PERCEPTIONS AND SHYNESS. With regard to the 25-item Shyness/Humor Inventory, as noted previously 17 of these items were drawn from McCroskey's (1970) earlier work. These items are noted in TABLE 1, the "primary pattern matrix," by an "*". All 25 items were factor analyzed and transformed to a primary pattern solution where the loadings are standardized regression weights as opposed to correlations. Table 1 represents a rearrangement, permuted, so that those variables loading together on a factor are grouped together. In order to be considered as loading on a factor it was arbitrally decided that variables had to have a loading of at least .40 or higher on the factor. The shyness scale which is the sum of 17 of these individual items proved to be a reliable measure

(coefficient alpha = .86). An inter-correlation matrix of all 25 items upon which the factor analysis was based is presented in TABLE 2. Factor 1 ("Ebullience"), consisting of the first 6 items, appears to be reflecting a definite lack of shyness: in other words, a desire and lack of fear of communicating in social situations. The second factor ("Communication Apprehension") consisting primarily of items 7 through 12, are describing communication apprehension or shyness. Items 7 ("I think I am shy") and 8 ("Others think I am shy"), though quite direct questions regarding this issue, were not derived from McCroskey (1970). Items 9 through 12 appear to reflect additional fears of talking with people, however here the people might be described as "familiar people." The third factor ("Stranger Anxiety"), consisting primarily of items 10, 13 through 16, and perhaps item 25 appear to reflect fear of talking with unfamiliar people or strangers and responding to questions, both somewhat stressful situations. All of the items clustering in Factor 3 were based on McCroskey's (1970) scale. Factor 4 ("Humorousness"), consisted of items 17 through 19. The fact that these two items are so strongly related in their clustering together validates their inclusion in this study. Factor 4 appears to be describing positive intrapersonal perceptions of "humorousness." Factor 5 ("Classroom Communication"), consisting primarily of items 20 through 22, as well as items 3 and 15, are somewhat more confusing. These items appear to be related more generally to positive feelings about communicating in school or classroom situations. Factor 6 ("Oral Presentation") and Factor 7 were primarily one item factors. Factor 6 appears to deal with direct talking or class presentations as reflected in item 23 and item 3 as well. Factor 7 ("Adult Communication") appears to be

dealing with communication with adults, primarily the teacher, as reflected in items 24 and item 2.

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PUT TABLE 1 & 2 ABOUT HERE

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Table 3 presents the inter-correlations of these seven factors. This table represents the intercorrelacions of the children's individual factor scores and is quite informative, especially with regard to the first five factors. If one lacks fear of communication (Factor 1, Ebullience), then they should not fear communication (Factor 2, Shyness): note the inverse relationship between Factors 1 and 2). Likewise, if they are in general fear of talking with strangers (Factor 3) they should not perceive themselves as "ebullient": note, once again the inverse relationship between Factors 1 and 3, as well as the positive relationship between Factors 2 and 3. Although the inter-correlations of Factor 4, "humorousness," with the first three factors are quite moderate, the direction of their relationships offers some evidence that if one is "ebullient" they likewise perceive themselves as humorous: they also do not see themselves as shy, nor do they have any great fears of talking with unfamiliar people. Factor 5, though not very strongly related to Factor 4 or 3, does appear to be moderately related in the expected directions to Factors 1 and 2. Factors 6 and 7 appeared to bare the weakest relationships with any of the first 3 factors. However, they do appear to have a moderate relationship with each other, as well as with Factor 4. If one perceives themselves as having a positive sense of humor, they also may respond positively to school unique situations such as classroom presentations and communications with teachers. It

should also be noted that the lack of relationship between factors 6 and 7 suggests an independent construct, one that is different from the other five factors. Although these last two factors were examined as predictors of other measures, they were not found to be effective. Since the first five factors appeared to be the strongest elements describing dimensions of intrapersonal shyness and humorous perceptions, their derived factor scores were later used as predictors of several of the other variables in the study.

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At this point a presentation of some of the inter-correlations among the various intrapersonal measures will be made. Table 4 presents some of the more relevant correlations from this analysis. In as much as shyness may be defined as "communication apprehension," one might expect this measure to be positively corrrelated to ones self-esteem and the obtained results were in agreement with this prediction. Since locus of control scores were found to be so strongly and negatively related to ones self-esteem - positive self-esteem associated with a relatively more internal since of personal control - it was predicted that relatively low shyness scores indicating communication apprehension, would be more likely to be associated with relatively more external perceptions of control. The data presented in TABLE 4 also moderately confirm this prediction. All three of the questions concerned with intrapersonal perceptions of humorousness (items 17, 18 and 19), were also found to be significantly correlated with the children's shyness scores. It is important to note that all three of these items are highly correlated

with each other. The children's intrapersonal ratings of themselves (as they thought others would rate them on the 1 to 5 Humor Scale) were also found to be highly correlated with these same three items as well as with the shyness scores. The locus of control scores and the self-esteem scores demonstrated far weaker relationships with the childrens' intrapersonal ratings from the Humor Scale. All of these correlations and their predicted directional relationships tend to validate both the construct of "communication apprehension," as well as confirm the notion that humor is definitely a social psychological behavior involving communication. If one has anxieties about communicating with others and actually withholds or withdraws from social situations, they would not be expected to be engaging in humorous behavior. And, if they are not doing so, they might not be perceived as being humorous. If this is so then it should be borne out in the next analysis of children's interpersonal perceptions of humorousness.

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INTERPERSONAL PERCEPTIONS. What are the relationships between peer popularity, classroom social distance and how humorous children perceive each other? TABLE 5 presents an inter-correlation matrix of several of these interpersonal perceptions. The strongest and perhaps most substantial correlation was found to be between children's social distance ratings, collected nearly four months earlier in the year, with their ratings of each others humorousness ($r = -.71$). Since high scores on the humor rating indicated a strong perception of the presence of humor, whereas high scores on the social distance measure

indicated great social distance, the interpretation here would be that children who are perceived as possessing a sense of humor are also highly accepted by the peers. The concurrent validity of these measures is also indicated in that all three of the positive nomination scores are also significantly correlated with the children's social distance scores as well as with their humor ratings. High scores on the positive nomination questions would indicate greater frequency of nominations, or peer popularity. The negative nomination question was also significantly correlated with the children's social distance ratings as well as all three positive nomination questions and the humor ratings.

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The results presented in TABLE 5 reveal an interesting picture of children's interpersonal perceptions. Children's interpersonal perceptions of humorousness are highly related with their classroom peer's acceptance of each other, and, this relationship was found to be even stronger than the social distance scores' relationship with peer popularity (See Figure 1). Given that these children's social distance and positive nominations were also measured in each of the preceding three years it is interesting to note the stability of these relationships. Table 6 shows the correlations of the children's humorousness ratings with their social distance and pooled positive nomination scores for each of the three preceding years. Though these correlations decline as one becomes more distant from the 1982 year in which the humor ratings were collected, all are statistically significant ($p<.01$), and seem to indicate a remarkable stability over

a four year span of time.

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PUT TABLE 6 AND FIGURE 1 HERE

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Stepwise multiple regression analyses were utilized to generate a model of the children's classroom social distance. As can be seen in TABLE 7, the stepwise multiple regression analysis selected the humor ratings before the more general and pooled (lunch + movie + academic questions) positive nomination scores. The pooled positive nomination scores were the second variate in the model. A cross-sectional developmental result was obtained in that children's ages were found to be the third variable in the model. Children's locus of control scores entered the model in the fourth step while their shyness scores were the last significant variable to enter the model. These last two intrapersonal variables will be discussed later in the next section of the results. Given these five variables a multiple correlation of .82 was obtained thus accounting for 68% of the variance in social distance, of which 50% of that variance was accounted for by children's humor ratings alone.

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PUT TABLE 7 HERE

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INTRA- INTER-PERSONAL PERCEPTIONS. Are children's intrapersonal perceptions an accurate reflection of how they are perceived by their peers? To answer this question some additional analyses were performed on the data. It should first be pointed out from the previous analyses that children's classroom social distance was reliably predicted by both their 17-item "shyness" scores and their

locus of control scores. Factor scores derived from the first five factors of the 25-item shyness-humor inventory were used as predictors in several stepwise multiple regression analyses. The interpersonal ratings of social distance and humor, the pooled positive nomination scores, and the intrapersonal perceptions of locus of control and self-esteem were analyzed with regard to the factor scores (first 5 only) reliableness in predicting these variables. These results appear somewhat marginal, but nevertheless, statistically significant and somewhat as expected. These data are presented in TABLE 8.

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PUT TABLE 8 HERE

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The two most significant factor scores predicting (R = .29) classroom social distance included Factor 1, Ebullience, and Factor 2, Apprehension. While this model is statistically significant ($p < .03$), it accounts for only 8% of the variance in classroom social distance ratings. The statistically significant ($p < .03$) factor selected for entry into the model predicting the children's pooled positive nomination popularity scores was Factor 2, Apprehension (R = .18). Primarily two significant factor scores, ebullience (Factor 1) and Apprehension (Factor 2), predicted children's humor ratings. Although Factor 4, Humorousness, was entered into the model and did increase the multiple-R, it was not statistically significant ($p < .13$). However, in terms of magnitude of all the multiple correlations obtained in this set of analyses, the multiple R predicting children's humor ratings from the derived factor scores was the second highest (R = .33). Not surprisingly, the intrapersonal perception of Self-esteem was found to be the most predictable (R = .36) and Factors 2

(Apprehension) and 3 (Stranger Anxiety) were the most significant variates in this model. Once again, Factor 4, Humorousness, was drawn into the model and did increase the mulitple-R, but was not statistically significant. The two statistically significant ($p < .01$) factor scores predicting the locus of control scores were Factor 4, Humorousness, and Factor 5, Classroom Communication ($R = .25$).

## DISCUSSION

In summary, the preceding analyses reveal an interesting view of children's intra- and interpersonal perceptions of each other. The data tend to validate many of the behavioral constructs which this study has attempted to integrate into a coherent model describing how childrens' internal perceptions about themselves (shyness, locus of control and self-esteem) are related to their interpersonal perceptions of each other (the social distance and humor ratings, as well as their popularity). Earlier speculations concerning the socially facilitating functions of humor within children's peer groups appear strongly confirmed. As Avner Ziv (1984) has stated, "...humor can help an individual to climb the ladder of social hierarchy - to be accepted, to win affection, and to gain status" (p. 30). If interpersonal communication necessarily facilitates social interaction, and humor is socially facilitating, then the absence of communication and humor might certainly inhibit positive social relationships. The data tend to support this description.

The 25-item Shyness/Humor Inventory proved to be a reliable instrument. Five factor-analytically derived factors proved to be predictive of several of the other variables in the study. The strongest two factors, Ebullience and Communication Apprehension, were significantly predictive of children's interpersonal perceptions of

social distance. These same two factors were also important predictors of the children's interpersonal humor ratings, thus offering further evidence for the association between shyness, humorousness and classroom social distance. Communication Apprehension (factor 2) and Stranger Anxiety (factor 3) were also important predictors of the children's intrapersonal self-esteem scores. Factor 4 (Humorousness) and factor 5 (Classroom Communication) were also found to be predictive of the children's locus of control scores. This association between children's locus of control perceptions and their humor responses as well as humor production has been examined by other researchers (Lefcourt, Grunnerud & McDonald, 1973; Lefcourt, Antrobus & Hogg, 1974; Prerost, 1983). Children who perceived themselves as having communication apprehension difficulties (shy) did not perceive themselves as having much of a sense of humor. They also did not possess strong positive self-esteems. They tended to locate their sense of personal control (locus of control) outside themselves (externality). Relatively younger children (8 and 9 years of age) appeared to be experiencing these symptoms more so than older children, however, even among the oldest children in this cross-sectional sample this pattern was present. Barnett and Zucker (1980) have pointed out the complexity of children's interpersonal relationships and friendships in their discussion of the "others-concept." Their stress upon the importance of the reciprocal influences among the many interacting personal and situational variables is most certainly acknowledged here. One should also emphasize the importance of both intra- and inter-personal perceptions.

The relationships between the children's various interpersonal

perceptions (humor ratings, social distance ratings and peer popularity as measured by positive nomination data) tend to also confirm a model of the socially facilitating functions of humor in classroom groups. The strongest predictor of social distance was found to be the interpersonal humor ratings. This variable, humor ratings, was even more strongly associated with social distance than the children's positive peer nomination data. However, the fact that all three measures are so strongly associated with each other only tends to validate the peer assessment procedures used in this study. The stability of these relationships over time are quite remarkable: remember that the humor ratings were collected nearly five months after the social distance and positive nomination data were gathered. Also, this stability was revealed in a longitudinal sample extending back three years in time. The correlations between humor ratings from the last year of the study, with social distance ratings as well as both positive and negative nomination data on this longitudinal sample were all statistically significant. Children who are perceived as having a strong sense of humor appear to be the most accepted peers. Likewise, children with the least sense of humor tend to have the greatest social distance. Recalling the patterns of "cliquing" (Hallinan, 1980) revealed in Figure 1, children with relatively high humor ratings in general tend to occupy positions of sociometric status within their classrooms. They also tend to have a stronger sense of internal locus of control as well as higher communication apprehension scores indicating a lack of shyness.

One might predict then that children who have a strong sense of internal control might not be experiencing communication apprehension difficulties. They might also intuitively use humor as a strategy

towards accomplishing the goals of positive social interactions (Renshaw & Asher, 1983). Interpersonal communication would be quite necessary to accomplish this goal. It (humor) might indeed be a basic "social competence" (Wine & Smye, 1981). In that so many recent studies have been put forth concerning children's friendships, popularity, rejection, etc. (See The entire Summer issue of the Merrill-Palmer Quarterly, 1983; Park & Asher, 1983; Epstein & Karweit, 1983; Rubin & Ross, 1982; Asher & Gottman, 1981; Foot, Chapman & Smith, 1980; Fine, 1980; Lewis & Rosenblum, 1975), as well as a growing body of literature on children's humor, it is quite surprising that children's interpersonal humor perceptions have not been examined more thoroughly.

The social psychological theories of the late Henri Tajfel (1978; 1982) might be particularly relevant in explaining some of these findings. Tajfel (1982) has described four key constructs which are associated with inter-group behavior: (1) social categorization, (2) social identity, (3) social comparisons, and (4) positive group distinctiveness. If one assumes that people socially create a network of various cognitive categories of other human beings (social categorization), and define their own membership within those categories (social identity), as well as evaluate the characteristics which are assigned to various positions within those categories, then perhaps one relevant dimension among those categories might indeed be a sense of humor. Reykowski (1982) has taken issue with the categorical nature of Tajfel's model and suggests a more continuous manner of measurement, similar to the social distance and humor ratings utilized in this study. Nevertheless, the patterns of cliquing (Hallinan, 1980) as well as the continuous nature of the

humor and social distance ratings shown in Figure 1, tend to confirm the reality of Tajfel's inter-group theories through the children's positive nominations and their interpersonal social distance and humor ratings. In the one example of a single classroom (Figure 1) two distinct cliques, one of female and the other of male 13-yr-olds remain quite separate from each other, thus demonstrating through the children's preferences evidence for "social categorization." Two distinct female cliques were also present, as well as possibly three male cliques. The central persons within all of these cliques obtained the highest humor ratings and for the most part the lowest social distance ratings: this pattern was especially so for the boys in this example. The other five classrooms obtained similar patterns. Ziv (1984) drawing upon Martineau's (1972) earlier research has suggested that humor contributes to a narrowing of the social distances between group members (p. 32), and this is evidenced in the sociogram contained in Figure 1.

Many researchers have expressed the importance of early identification of children experiencing problems of social competence (Wyne & Smye, 1981; Tyne & Geary, 1980). Several researchers have also attempted intervention procedures designed to inhance children's friendships and reduce social rejection through social competency training (e.g., Asher, Oden & Gottmann, 1977). Our data suggest that one aspect of social rejection might be shyness. Wolf (1984) has demonstrated the effectiveness of a cognitive modification and skills training program in changing children's intrapersonal perceptions of communication apprehension, thus indicating that communication apprehension can be overcome. Nowhere in the literature on intervention programs designed to help children experiencing

communication apprehension difficulties or social rejection have we encountered attempts at affecting children's communication behaviors or social competencies through the use of humor training. In as much as our data demonstrate children's strong awareness of each others humorousness, and in that humorousness appears to be so strongly related to children's peer acceptance, humor training and appreciation would appear to be a most likely prospect for theraputic intervention for children experiencing communication apprehension as well as social rejection.

In conclusion, factor analysis of a 25-item intrapersonal Shyness/Humor Inventory was carried out on the responses of 169 elementary children between the ages of 8 and 13. Five distinct factors (Ebullience, Communication Apprehension, Stranger Anxiety, Humorousness, Classroom Communication) were found to be significant predictors of classroom social distance and humor ratings, positive sociometric nomination scores, as well as two related intrapersonal perceptions of self-esteem and locus of control. Classroom social distance ratings were most strongly predicted by children's interpersonal perceptions of humorousness, as well as their positive sociometric nominations, ages, and intrapersonal perceptions of locus of control and communication apprehension (shyness). The data confirm a hypothesis suggesting the socially facilitating effects of humor and the necessity of interpersonal communication. Tajfel's (1982) theories concerning inter-group behavior are drawn upon for theoretical explanation. The development of children's humor production as well as appreciation are suggested as a viable theraputic intervention approach for children experiencing communication apprehension difficulties as well as social rejection.

In retrospect, it is believed that this study provides a vital and interdependent link between three maturing bodies of research: (1) the socially facilitating effects of humor, (2)children's friendships, attraction and rejection of each other, and (3) shyness and communication apprehension.

REFERENCE FOOTNOTES

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2There are several variables which could have been taken into consideration but were not, either for lack of foresight, or simply because of other mitigating circumstances: due to financial considerations Miami University's administration decided to disband the William Holmes McGuffey Laboratory School during the last year (Spring, 1983) of this study and this caused the termination of an intended six year longitudinal examination of children's developing social behaviors. The children's records have been dispersed throughout several local public schools and simply cannot be retrieved at this point in time. Needless to say, this was quite disappointing after having invested four years into this study. As the laboratory school was somewhat experimental, their records contained a great variety of both group and individual IQ test data, as well as several different standardized achievement test results, none of which remained consistent or constant across the subjects, either from one age group to another, or from one year to the next. This ongoing study was one of the only data bases on these children which did remain constant over time. The children in this facility did not receive letter grades for their academic achievement.

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TABLE 1. SHYNESS/HUMOR INVENTORY: PRIMARY PATTERN MATRIX.
ALL ITEMS WERE RESPONDED TO ON A 1 TO FIVE SCALE AS FOLLOWS:
1 = YES; 2 = yes; 3 = ?; 4 = no; 5 = NO. (*) SEVENTEEN SHYNESS SCALE ITEMS.

| | FACTORS | | | | | | |
|---|---|---|---|---|---|---|---|
| ITEM | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| *1. I like to talk when the whole class listens. | .91 | .17 | -.07 | -.15 | -.20 | .17 | .03 |
| *2. I like talking to teachers. | .62 | .05 | .15 | .15 | .08 | -.10 | .39 |
| *3. I like standing up and talking to a group of people. | .55 | -.14 | .06 | -.07 | .35 | .16 | -.14 |
| *4. I like it when it is my turn to talk in class. | .55 | -.13 | .12 | .14 | .17 | .35 | -.01 |
| *5. Standing up to talk in front of other people scares me. | -.55 | .26 | .22 | .10 | -.13 | .22 | .08 |
| *6. Talking to teachers scares me. | -.52 | -.01 | .22 | -.31 | .10 | .17 | -.19 |
| 7. I think I am shy. | -.13 | .81 | .09 | .01 | .22 | -.07 | .09 |
| 8. Others think I am shy. | .02 | .77 | .08 | .14 | .23 | -.22 | -.20 |
| *9. When several of my friends and I get together, I feel free to be myself and say what I want to say. | -.17 | -.64 | .22 | .28 | -.07 | .01 | .09 |
| *10. Talking to someone new scares me. | .10 | .43 | .47 | .17 | -.12 | .01 | -.26 |
| *11. When I am in a small group I usually keep quiet and let others do the talking. | -.01 | .44 | .06 | -.14 | -.31 | .12 | .13 |
| *12. I like it when I don't have to talk. | -.26 | .40 | -.04 | .02 | -.23 | -.21 | -.09 |
| *13. There are a lot of people I am scared to talk to. | .14 | .13 | .84 | .01 | -.02 | .16 | .03 |
| *14. When someone asks me a question, it scares me. | -.22 | -.15 | .72 | -.06 | .31 | -.06 | .10 |
| *15. I like to talk to people I haven't met before. | .01 | .15 | -.57 | -.04 | .28 | .34 | .14 |
| *16. I am scared to talk to people. | -.12 | .37 | .44 | -.14 | -.02 | .09 | .27 |
| 17. My friends think I have a good sense of humor. | -.02 | -.03 | -.02 | .83 | .09 | -.03 | -.00 |
| 18. Others like my jokes. | .05 | -.08 | .08 | .82 | -.09 | -.06 | .05 |
| 19. I don't really have much of a sense of humor. | .18 | -.09 | .32 | -.65 | .09 | -.35 | .05 |
| 20. I wish that I could talk to someone about my thoughts and feelings. | .05 | .26 | .07 | .02 | .75 | -.07 | -.08 |
| 21. I like school. | .05 | .04 | .05 | -.10 | .70 | -.13 | .02 |
| *22. I like to talk to new people. | .03 | .04 | .32 | -.08 | -.51 | .12 | -.12 |
| 23. I look forward to talking in class. | .13 | .13 | -.08 | -.06 | -.06 | .83 | -.17 |
| *24. When I need help from my teacher I ask for it. | .09 | -.05 | .02 | .05 | -.05 | -.15 | .90 |
| 25. I often have something to say in a class discussion but don't say it. | -.06 | .10 | .37 | -.25 | -.05 | .01 | -.24 |

TABLE 2. INTER-CORRELATION MATRIX OF 25 ITEM SHYNESS/HUMOR INVENTORY

| ITEMS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2. | .32 | | | | | | | | | | | | |
| 3. | .44 | .37 | | | | | | | | | | | |
| 4. | .42 | .43 | .55 | | | | | | | | | | |
| 5. | .43 | .32 | .53 | .46 | | | | | | | | | |
| 6. | .36 | .51 | .25 | .35 | .40 | | | | | | | | |
| 7. | .23 | .20 | .26 | .30 | .43 | .33 | | | | | | | |
| 8. | .16 | .16 | .25 | .20 | .27 | .24 | .66 | | | | | | |
| 9. | -.06 | .15 | .12 | .14 | .19 | .19 | .26 | .26 | | | | | |
| 10. | .11 | .26 | .25 | .28 | .39 | .23 | .46 | .51 | .20 | | | | |
| 11. | .08 | .18 | .28 | .28 | .41 | .30 | .34 | .23 | .16 | .30 | | | |
| 12. | .29 | .29 | .44 | .48 | .33 | .39 | .36 | .39 | .14 | .36 | .41 | | |
| 13. | .09 | .08 | .15 | .10 | .31 | .33 | .33 | .29 | .12 | .50 | .26 | .21 | |
| 14. | .25 | .05 | .08 | .15 | .24 | .38 | .22 | .20 | .05 | .23 | .11 | .12 | .44 |
| 15. | .24 | .15 | .33 | .36 | .29 | .21 | .13 | .26 | .04 | .44 | .11 | .30 | .38 |
| 16. | .21 | .23 | .29 | .32 | .46 | .37 | .46 | .28 | .28 | .42 | .29 | .33 | .54 |
| 17. | .07 | -.25 | -.16 | -.30 | -.17 | -.39 | -.22 | -.12 | -.22 | -.15 | -.20 | -.15 | -.22 |
| 18. | -.09 | -.30 | -.13 | -.23 | -.15 | -.39 | -.19 | -.15 | -.23 | -.13 | -.18 | -.21 | -.11 |
| 19. | .04 | .19 | .04 | .15 | .06 | .26 | .11 | .13 | .12 | .16 | .14 | .08 | .22 |
| 20. | -.08 | -.15 | -.24 | -.17 | -.08 | -.02 | .06 | .05 | .05 | -.03 | -.05 | -.14 | .10 |
| 21. | -.03 | -.15 | -.33 | -.27 | -.14 | -.06 | -.01 | -.02 | -.06 | -.10 | -.15 | -.26 | -.08 |
| 22. | .21 | .33 | .37 | .31 | .35 | .34 | .30 | .27 | .08 | .41 | .39 | .40 | .28 |
| 23 | .26 | .16 | .28 | .42 | .07 | .10 | .14 | .17 | .07 | .14 | .14 | .31 | .04 |
| 24. | -.10 | -.32 | -.05 | -.22 | -.12 | -.28 | -.10 | -.25 | -.23 | -.27 | -.13 | -.23 | -.13 |
| 25. | .20 | .22 | .23 | .29 | .34 | .40 | .33 | .27 | .18 | .35 | .30 | .35 | .38 |

(CONTINUED)

| ITEMS | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 15. | .27 | | | | | | | | | | |
| 16. | .28 | .26 | | | | | | | | | |
| 17. | -.14 | -.16 | .26 | | | | | | | | |
| 18. | -.12 | -.18 | -.18 | .67 | | | | | | | |
| 19. | .25 | .25 | -.22 | -.38 | -.36 | | | | | | |
| 20. | .07 | -.10 | -.02 | .11 | -.01 | .06 | | | | | |
| 21. | .06 | -.22 | -.02 | .05 | -.09 | -.02 | .23 | | | | |
| 22. | .13 | .52 | .32 | -.22 | -.22 | .23 | -.30 | -.23 | | | |
| 23. | .10 | .30 | .12 | -.03 | -.06 | .18 | -.11 | -.21 | .30 | | |
| 24. | -.06 | -.18 | -.05 | .26 | .23 | -.15 | -.05 | .05 | -.20 | -.03 | |
| 25. | .29 | .27 | .35 | -.35 | -.30 | .34 | -.07 | -.07 | .36 | .19 | -.38 |

TABLE 3. PRIMARY INTERCORRELATIONS OF 7 FACTORS.

| FACTORS | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 2. | -.37 | | | | | |
| 3. | -.31 | .38 | | | | |
| 4. | .25 | -.21 | -.22 | | | |
| 5. | .32 | -.30 | -.17 | .13 | | |
| 6 | .10 | -.02 | -.14 | -.04 | .16 | |
| 7. | .10 | -.17 | -.17 | .23 | .14 | .24 |

TABLE 4: INTER-CORRELATION OF SEVERAL INTRAPERSONAL PERCEPTION VARIABLES.

| VARIABLES | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1. SHYNESS SCORES | | | | | | |
| 2. LOCUS OF CONTROL | -.23 | | | | | |
| 3. SELF-ESTEEM | .36 | -.51 | | | | |
| 4. ITEM 17 | .33 | -.22 | .16 | | | |
| 5. ITEM 18 | -.39 | .13 | -.23 | .67 | | |
| 6. ITEM 19 | -.37 | -.22 | -.18 | -.38 | -.36 | |
| 7. PERSONAL FUNNY RATING | .32 | -.17 | .16 | .38 | -.26 | -.46 |

ALL COEFFICIENTS GREATER IN MAGNITUDE THAN .16 ARE SIGNIFICANTLY ($p<.05$) DIFFERENT FROM ZERO (n=150).

TABLE 5. INTER-CORRELATION MATRIX OF INTERPERSONAL RATINGS AND POSITIVE AND NEGATIVE SOCIOMETRIC NOMINATIONS.

| VARIABLES | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1. SOCIAL DISTANCE RATINGS | | | | | | |
| 2. POSITIVE NOMINATION LUNCH | -.59 | | | | | |
| 3. POSITIVE NOMINATION MOVIE | -.55 | .72 | | | | |
| 4. POSITIVE NOMINATION ACADEMIC | -.50 | .63 | .53 | | | |
| 5. LUNCH, MOVIE, ACADEMIC POOLED | -.62 | - | - | - | | |
| 6. NEGATIVE NOMINATION | .69 | -.42 | -.33 | -.31 | -.40 | |
| 7. HUMOURSNESS RATING . | -.71 | .45 | .42 | .41 | .48 | -.42 |

SINCE VARIABLE 5 WAS DERIVED FROM VARIABLES 2, 3 AND 4, THESE CORRELATIONS WOULD NECESSARILY BE ARTIFACTUAL AND THEREFORE ARE NOT REPORTED.

TABLE 6. CORRELATIONS OF CHILDREN'S 1982 INTERPERSONAL HUMOR RATINGS WITH THEIR SOCIAL DISTANCE, POSITIVE AND NEGATIVE NOMINATION SCORES OVER A FOUR YEAR PERIOD OF TIME.

| | | YEARS | | | |
|---|---|---|---|---|---|
| VARIABLES | n | 1979 (70) | 1980 (96) | 1981 (121) | 1982 (165) |
| SOCIAL DISTANCE SCORES | | -.36 | -.39 | -.48 | -.71 |
| POOLED POSITIVE NOMINATION SCORES | | .26 | .40 | .48 | .48 |
| NEGATIVE NOMINATION SCORES | | - | -.24 | -.36 | -.42 |

NEGATIVE NOMINATIONS WERE NOT SOLICITED DURING THE FIRST YEAR OF THE STUDY (1979). ALL CORRELATION COEFFICIENTS ARE STATISTICALLY SIGNIFICANT ($P<.01$).

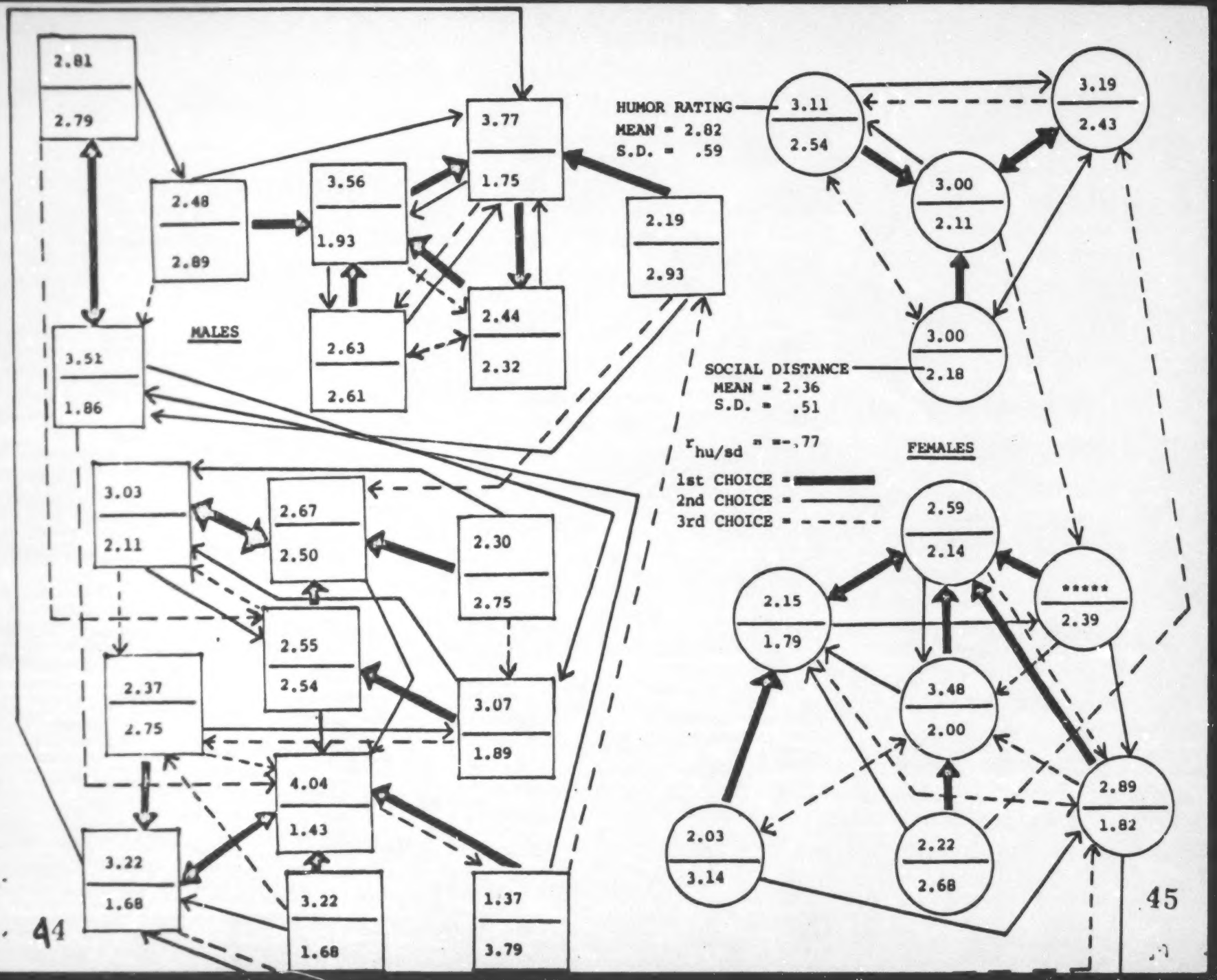
TABLE 7. STEPWISE MULTIPLE REGRESSION ANALYSIS PREDICTING CHILDREN'S CLASSROOM SOCIAL DISTANCE.

| VARIABLES | R2 | INCREASE | DF | SS | F | p< |
|---|---|---|---|---|---|---|
| REGRESSION | | | 5 | 30.247 | 53.92 | .0001 |
| ERROR | | | 129 | 14.47 | | |
| TOTAL | | | 134 | 44.72 | | |
| PREDICTORS: | | | | | | |
| HUMOR RATINGS | .499 | - | | 5.86 | 52.30 | .0001 |
| POOLED + NOMINATIONS | .605 | .11 | | 5.29 | 47.51 | .0001 |
| AGE | .648 | .04 | | .69 | 6.14 | .01 |
| LOCUS OF CONTROL | .665 | .01 | | 1.02 | 9.09 | .003 |
| SHYNESS SCORE | .676 | .01 | | .47 | 4.23 | .04 |

TABLE 8. STEPWISE MULTIPLE REGRESSION ANALYSES PREDICTING CHILDREN'S CLASSROOM SOCIAL DISTANCE RATINGS, HUMOR RATINGS, POSITIVE NOMINATION SCORES, SELF-ESTEEM AND LOCUS OF CONTROL SCORES, AS PREDICTED BY 5 FACTOR SCORES DEFIVED FROM THE SHY-HUMOR INVENTORY FACTOR ANALYSIS.

| VARIABLES | R2 | INCREASE | DF | SS | F | p< |
|---|---|---|---|---|---|---|
| CLASSROOM SOCIAL DISTANCE (R = .29) | | | | | | |
| REGRESSION | | | 2 | 4.39 | 4.56 | .03 |
| ERROR | | | 147 | 48.38 | .32 | |
| TOTAL | | | 149 | 52.78 | | |
| PREDICTORS: | | | | | | |
| FACTOR 1, EBULLIENCE | .03 | | | 2.81 | 8.56 | .004 |
| FACTOR 2, APPREHENSION | .08 | .05 | | 3.20 | 9.73 | .002 |
| POOLED POSITIVE NOMINATION SCORES (R = .18) | | | | | | |
| REGRESSION | | | 1 | 783.18 | 5.12 | .025 |
| ERROR | | | 148 | 22621.64 | | |
| TOTAL | | | 149 | 23404.83 | | |
| PREDICTOR: | | | | | | |
| FACTOR 2, APPREHENSION | .03 | | | 783.18 | 5.12 | .025 |
| HUMOR RATINGS (R = .33) | | | | | | |
| REGRESSION | | | 3 | 4.94 | 6.11 | .003 |
| ERROR | | | 146 | 39.37 | | |
| TOTAL | | | 149 | 44.31 | | |
| PREDICTORS: | | | | | | |
| FACTOR 1, EBULLIENCE | .05 | | | 2.15 | 7.97 | .005 |
| FACTOR 2, APPREHENSION | .09 | .03 | | 3.42 | 12.71 | .001 |
| FACTOR 4 HUMOROUSNESS | .11 | .02 | | .63 | 2.33 | .13 |
| SELF CONCEPT SCORES (R = .36) | | | | | | |
| REGRESSION | | | 3 | 566.12 | 7.30 | .0002 |
| ERROR | | | 146 | 3774.55 | | |
| TOTAL | | | 149 | 4340.67 | | |
| PREDICTORS: | | | | | | |
| FACTOR 2, APPREHENSION | .09 | | | 164.77 | 6.37 | .01 |
| FACTOR 3, STRANGER ANX. | .12 | .02 | | 88.56 | 3.43 | .05 |
| FACTOR 4, HUMOROUSNESS | .13 | .01 | | 62.50 | 2.42 | .12 |
| LOCUS OF CONTROL SCORES (R = .25) | | | | | | |
| REGRESSION | | | 2 | 298.78 | 5.01 | .02 |
| ERROR | | | 146 | 4354.33 | | |
| TOTAL | | | 148 | 4653.11 | | |
| PREDICTORS: | | | | | | |
| FACTOR 4, HUMOROUSNESS | .04 | | | 150.14 | 5.03 | .02 |
| FACTOR 5, CLASS COM. | .07 | .03 | | 110.00 | 3.66 | .05 |

Figure 1. Network of Sociometric Preferences of 8th Graders for Lunch.


2.81
2.79
2.48
2.89
3.56
1.93
3.77
1.75
2.19
2.93
2.44
2.32
2.63
2.61
3.51
1.86
MALES
HUMOR RATING
MEAN = 2.82
S.D. = .59
3.11
2.54
3.19
2.43
3.00
2.11
3.00
2.18
SOCIAL DISTANCE
MEAN = 2.36
S.D. = .51
$r_{hu/sd}$ = -.77
1st CHOICE =
2nd CHOICE =
3rd CHOICE =
FEMALES
3.03
2.11
2.67
2.50
2.30
2.75
2.55
2.54
2.37
2.75
3.07
1.89
4.04
1.43
3.22
1.68
3.22
1.68
1.37
3.79
2.59
2.14
2.15
1.79
*****
2.39
3.48
2.00
2.89
1.82
2.03
3.14
2.22
2.68